

**US DEPARTMENT OF  
DEFENSE (DoD) COMBINED  
ACTIVE DUTY  
EYE INJURY SUMMARY  
CALENDAR YEAR 2006**

Approved for public release, distribution unlimited

2013



# **CY 2006 DEPARTMENT OF DEFENSE (DoD) COMBINED ACTIVE DUTY (AD) EYE INJURY REPORT SUMMARY**

**INTRODUCTION:** In 2010 the Armed Forces Health Surveillance Center (AFHSC) and Tri-Service Vision Conservation and Readiness Program (TSVCRP) of the US Army Public Health Command (USAPHC) began development of an Annual Active Duty Military Eye Injury Summary that would detail cause and type of injury along with demographics of eye injuries (Age, Gender, Rank, Occupational Group).

The first edition of the summary and annual summaries back through calendar year 2000, were produced in the spring of 2011. An analysis of years 2000-2010 was published in the May 2011 Medical Surveillance Monthly Report (MSMR). The AFHSC also developed a Case Definition for Eye Injuries that details the code set and methodology used to develop the summaries. Both the MSMR Article and Case Definition for Eye Injuries are available on the AFHSC website: <http://afhsc.army.mil/home>.

This summary contains detailed data, along with a set of summary tables detailing Ambulatory and Hospitalization rates (per 1000 person-years) for Injury Group, Cause of Injury and Occupational Group. Summary tables for Deployment-Associated Eye Injuries detailing frequency of Eye Injuries by Type of Injury and Occupational Group are also provided. Occupational Group data is for Enlisted members only. Deployment-Associated Eye Injuries are presented without regard to Ambulatory or Hospitalized status.

As one of the underlying goals of the summary is to make eye injury surveillance data accessible and useable, individual annual eye injury summaries for all years and all services (Combined DoD, Army, Navy, Air Force, Marine Corps and Coast Guard) are posted on the USAPHC public website.

For questions or additional information regarding the summaries please contact the TSVCRP:

By Email: [usarmy.apg.medcom-phc.mbx.dcpm-tri-service-optometry@mail.mil](mailto:usarmy.apg.medcom-phc.mbx.dcpm-tri-service-optometry@mail.mil)

Telephone: 410-436-2714 FAX: 410-436-1325

Additional program information and educational materials can be found at: <http://dodvision.com/> and the USAPHC Public Website at: <http://phc.amedd.army.mil/Pages/default.aspx>

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**INJURY CODE GROUP DETAILS:** The following code groupings were used to develop the summary. Additional details may be found in the AFHSC Case Definition available at: <http://afhsc.army.mil/home>.

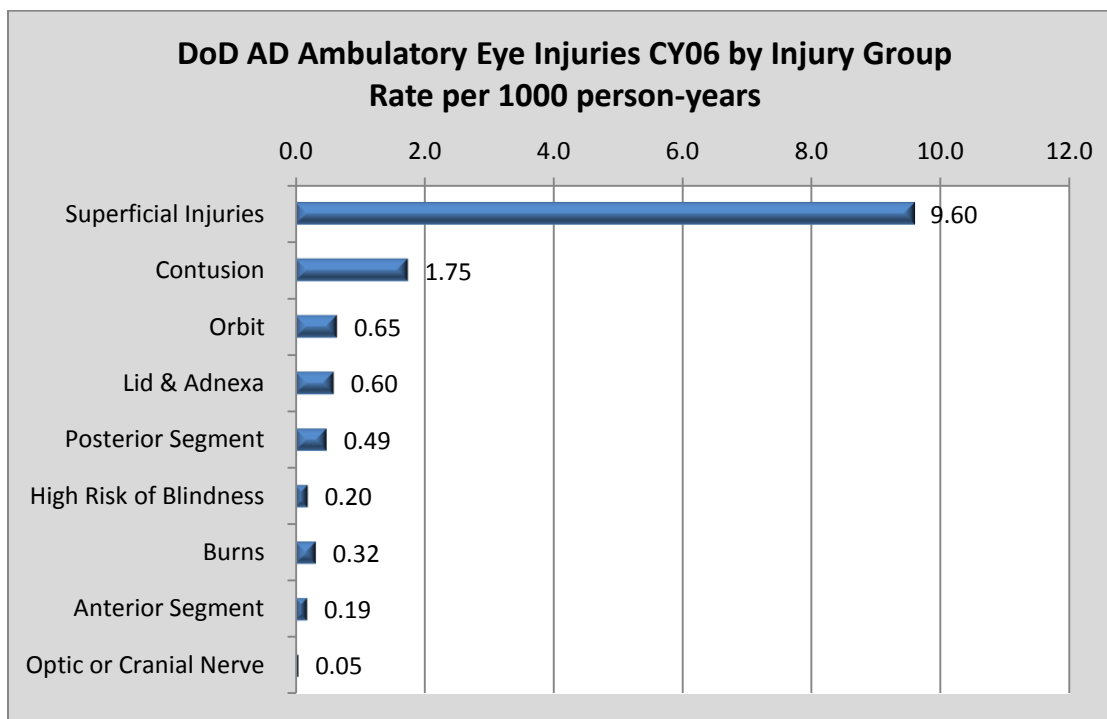
- 1) **Superficial:** all 918 series codes (superficial injury of eye and adnexa) and all 930 series codes (foreign body on external eye).
- 2) **Contusion:** all 921 series codes (contusion of eye and adnexa).
- 3) **Orbit:** All 802 series codes (fracture of face bones), 870.3 and 870.4 (penetrating wound of orbit without and with foreign body) and 376.32 (orbital hemorrhage).
- 4) **Lid/adnexa:** all 870 series codes (open wound of ocular adnexa) with the exception of 870.3 and 870.4 (see orbit above).
- 5) **Posterior segment:** 362.81 (retinal hemorrhage), all 361.0x series codes (retinal detachment with retinal defect), 363.61 (choroidal hemorrhage, unspecified), 363.63 (choroidal rupture), 379.23 (vitreous hemorrhage), 360.00 and 360.01 (purulent and acute endophthalmitis).
- 6) **High risk of blindness:** all 871 series codes (open wound of eyeball).
- 7) **Burns:** all 940 series codes (burn confined to eye and adnexa) as well as all 940.x2 codes (burns to eye with other parts of face, head and neck).
- 8) **Anterior segment:** 364.41 (hyphema), 366.21 and 366.22 (localized and total traumatic cataract), and 364.76 (iridodialysis).
- 9) **Optic/cranial nerve:** 950.0 (optic nerve injury), 950.1 (injury to optic chiasm), 950.9 (injury to optic nerve and pathways, unspecified), 951.0 (injury to oculomotor nerve), 951.1 (injury to trochlear nerve) and 951.3 (injury to abducens nerve).

**DETAILS FOR TOTAL NUMBERS:** Because patients may have been coded with more than one injury group or cause of injury, the sum of cases by injury group and the sum of cases by causes of injury will be greater than the total number of patients.

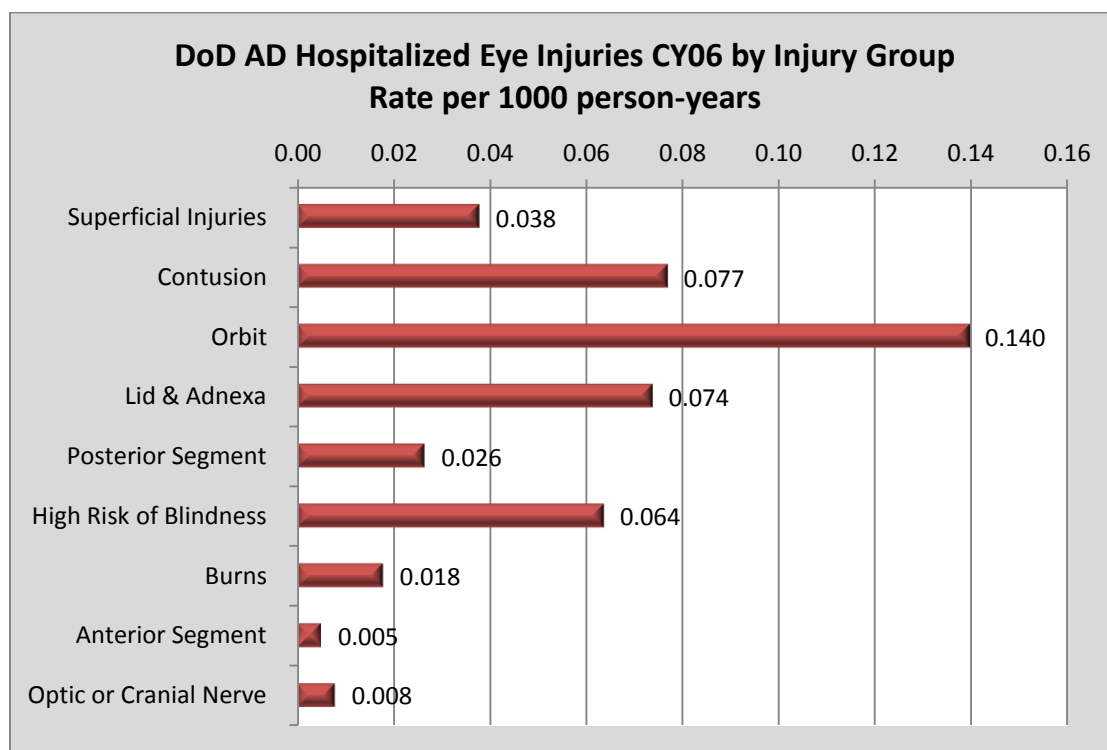
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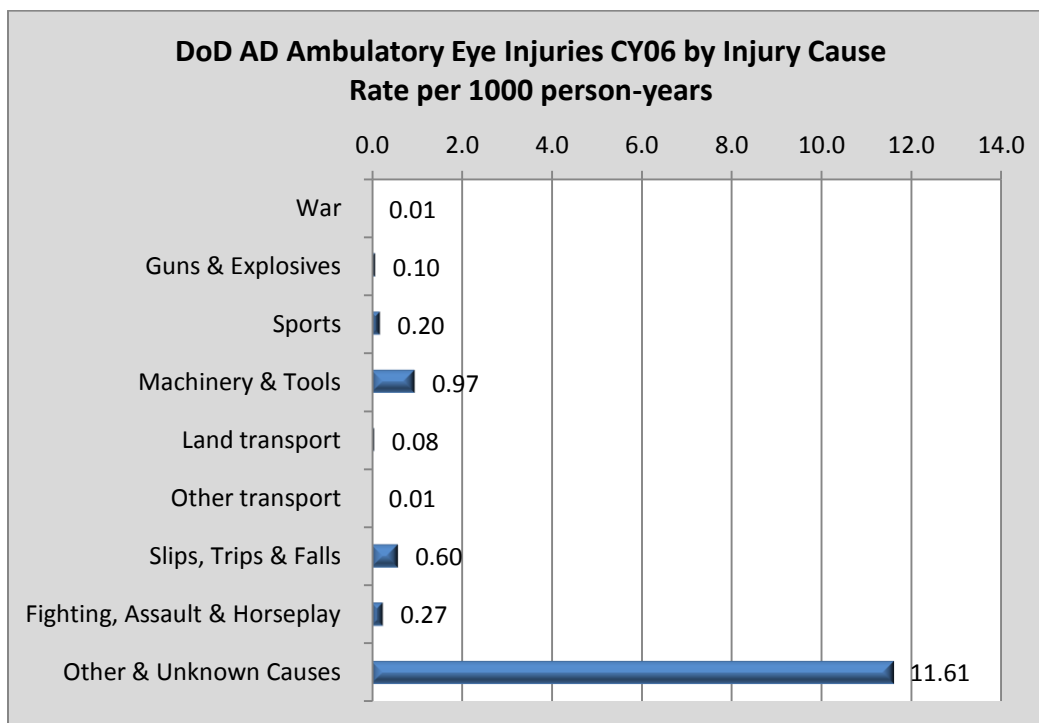
Please note the difference in scale between Ambulatory and Hospitalized graphs



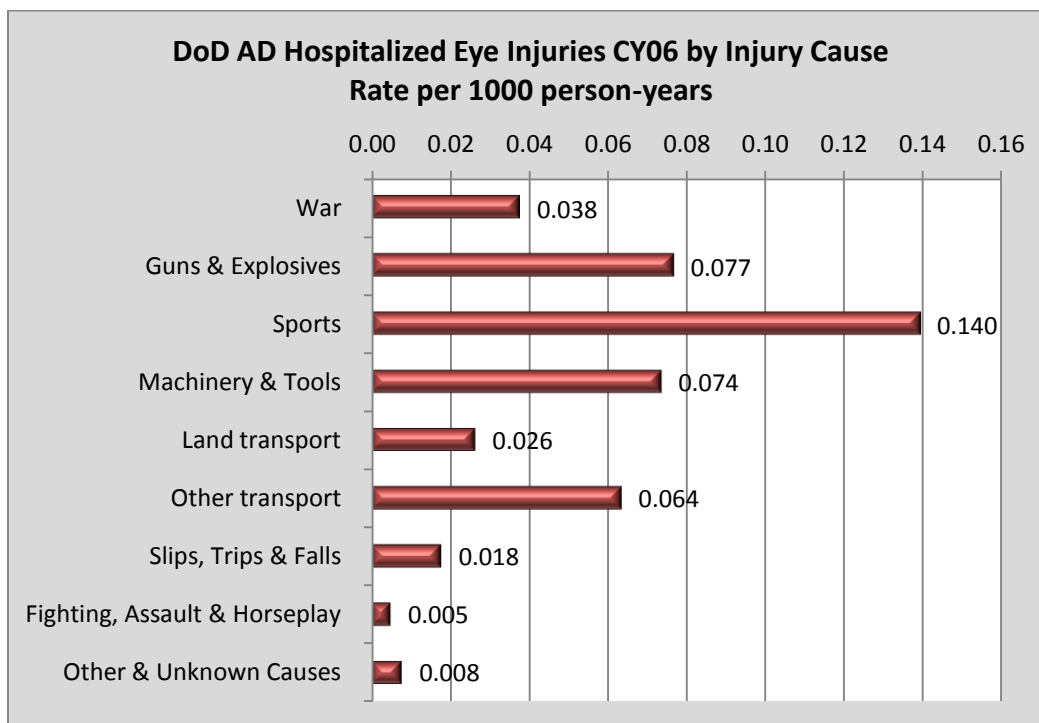
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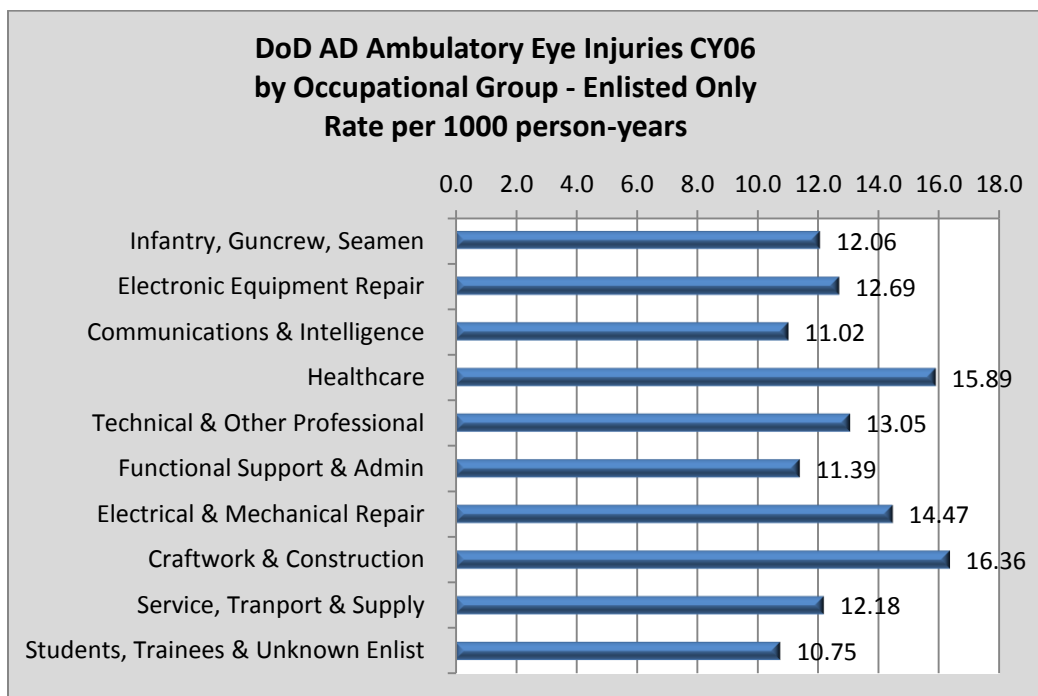
Please note the difference in scale between Ambulatory and Hospitalized graphs



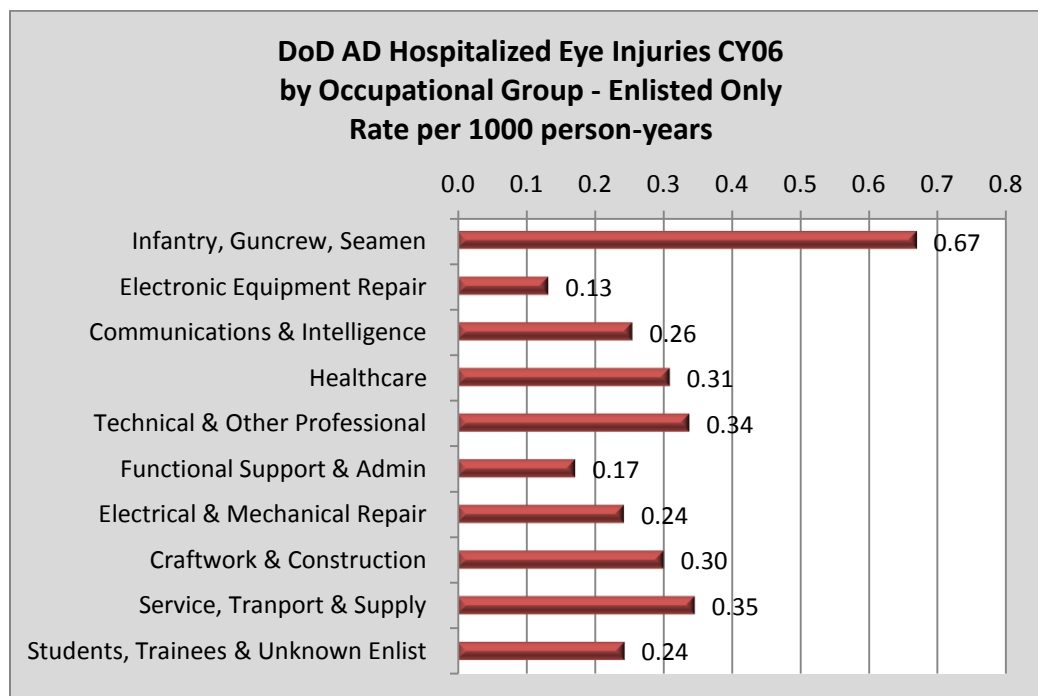
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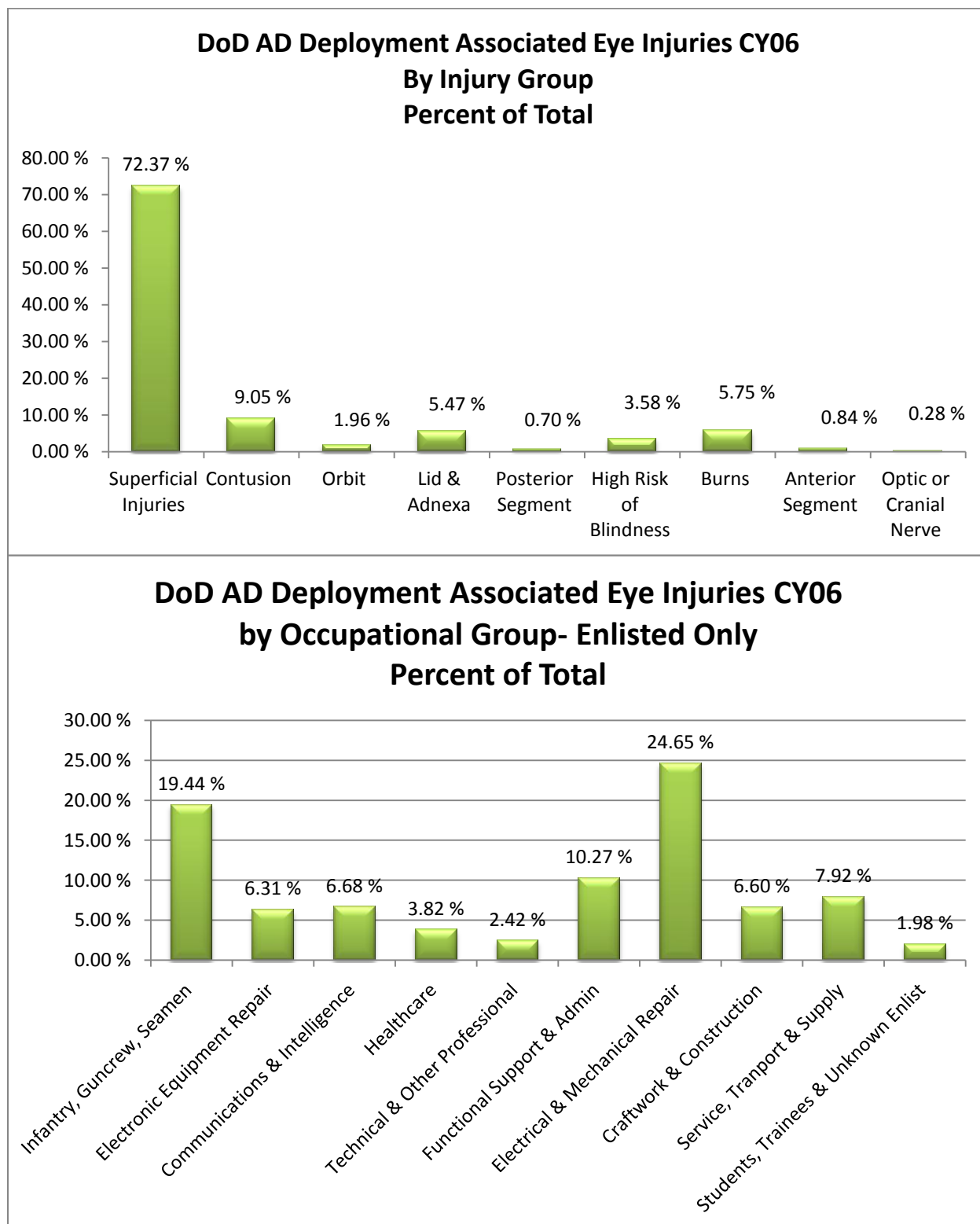
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		2006											
		Ambulatory MTF Visits				Deployment-Associated Healthcare				Hospitalizations			
		Primary		All Diagnoses		Primary		All Diagnoses		Primary		All Diagnoses	
		Count	Rate <sup>1</sup>	Count	Rate	Count	% total <sup>1</sup>	Count	% total <sup>1</sup>	Count	Rate	Count	Rate
ALL ACTIVE COMPONENT													
	Total	15,117	10.79	17,894	12.77	1,300	100.00	1,363	100.00	119	0.08	396	0.28
	Superficial Injuries	11,807	8.43	13,448	9.60	994	73.47	1,032	72.37	12	0.01	53	0.04
	Contusion	1,919	1.38	2,435	1.75	115	8.50	129	9.05	44	0.03	107	0.08
	Orbit	653	0.47	913	0.65	24	1.77	28	1.96	71	0.05	195	0.14
	Lid & Adnexa	684	0.49	842	0.60	72	5.32	78	5.47	34	0.02	103	0.07
	Posterior Segment	403	0.29	690	0.49	7	0.52	10	0.70	21	0.02	37	0.03
	High Risk of Blindness	243	0.17	278	0.20	47	3.47	51	3.58	50	0.04	89	0.06
	Burns	408	0.29	453	0.32	80	5.91	82	5.75	7	0.01	25	0.02
	Anterior Segment	191	0.14	265	0.19	12	0.89	12	0.84	4	0.00	7	0.01
	Optic or Cranial Nerve	41	0.03	77	0.05	2	0.15	4	0.28	1	0.00	11	0.01
	Male	12,792	10.67	15,189	12.67	1,114	85.69	1,171	85.91	112	0.09	382	0.32
	Female	2,325	11.49	2,705	13.37	186	14.31	192	14.09	7	0.03	14	0.07
	War	17	0.01	19	0.01	not assessed <sup>2</sup>				23	0.02	78	0.06
	Guns & Explosives	119	0.08	136	0.10					84	0.06	200	0.14
	Sports	250	0.18	287	0.20					10	0.01	11	0.01
	Machinery & Tools	1,293	0.92	1,362	0.97					24	0.02	33	0.02
	Land transport	63	0.04	109	0.08					12	0.01	44	0.03
	Other transport	11	0.01	13	0.01					0	0.00	3	0.00
	Slips, Trips & Falls	756	0.54	841	0.60					10	0.01	29	0.02
	Fighting, Assault & Horseplay	263	0.19	373	0.27					20	0.01	37	0.03
	Other & Unknown Causes	13,577	9.69	16,261	11.61					61	0.04	192	0.14
ENLISTED (all diagnoses combined)													
	Enlisted	12,676	10.84	14,993	12.82	1,168	89.85	1,228	90.10	114	0.10	374	0.32
	<20	912	7.28	1,097	8.76	51	3.92	53	3.89	6	0.05	30	0.24
	20-24	4,881	10.54	5,858	12.65	599	46.08	628	46.07	69	0.15	205	0.44
	25-29	3,000	12.35	3,533	14.55	258	19.85	270	19.81	22	0.09	76	0.31
	30-34	1,680	11.30	1,924	12.94	130	10.00	142	10.42	11	0.07	36	0.24
	35-39	1,300	10.98	1,499	12.66	87	6.69	90	6.60	6	0.05	21	0.18
	>=40	903	12.65	1,082	15.16	43	3.31	45	3.30	0	0.00	6	0.08
	E0-E4	6,454	10.81	7,774	13.02	720	55.38	755	55.39	79	0.13	247	0.41
	E5-E9	6,222	10.87	7,219	12.61	448	34.46	473	34.70	35	0.06	127	0.22
	Infantry, Guncrew, Seamen	2,018	9.74	2,500	12.06	242	18.62	265	19.44	36	0.17	139	0.67
	Electronic Equipment Repair	1,070	10.97	1,238	12.69	84	6.46	86	6.31	6	0.06	13	0.13
	Communications & Intelligence	1,011	9.24	1,206	11.02	81	6.23	91	6.68	10	0.09	28	0.26
	Healthcare	1,102	13.68	1,280	15.89	51	3.92	52	3.82	6	0.07	25	0.31
	Technical & Other Professional	378	10.68	462	13.05	33	2.54	33	2.42	2	0.06	12	0.34
	Functional Support & Admin	1,725	9.59	2,048	11.39	137	10.54	140	10.27	10	0.06	31	0.17
	Electrical & Mechanical Repair	3,037	12.53	3,505	14.47	323	24.85	336	24.65	20	0.08	59	0.24
	Craftwork & Construction	683	14.70	760	16.36	89	6.85	90	6.60	5	0.11	14	0.30
	Service, Transport & Supply	1,108	10.12	1,334	12.18	101	7.77	108	7.92	15	0.14	38	0.35
	Students, Trainees & Unknown Enlist	544	8.86	660	10.75	27	2.08	27	1.98	4	0.07	15	0.24
	Army	4,248	10.33	5,235	12.73	571	43.92	623	45.71	65	0.16	191	0.46
	Navy	3,430	11.68	3,861	13.15	318	24.46	323	23.70	9	0.03	62	0.21
	Air Force	2,954	10.79	3,442	12.58	245	18.85	247	18.12	8	0.03	35	0.13
	Marine Corps	1,570	9.86	1,891	11.87	33	2.54	34	2.49	29	0.18	78	0.49
	Coast Guard	474	14.85	564	17.67	1	0.08	1	0.07	3	0.09	8	0.25
OFFICER (all diagnoses combined)													
	Officer	2,441	10.54	2,901	12.53	132	10.15	135	9.90	5	0.02	22	0.10
	<20	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	20-24	224	9.05	261	10.54	14	1.08	14	1.03	0	0.00	3	0.12
	25-29	464	8.98	581	11.25	28	2.15	28	2.05	3	0.06	8	0.15
	30-34	476	9.59	553	11.14	27	2.08	29	2.13	2	0.04	6	0.12
	35-39	497	10.42	580	12.17	29	2.23	29	2.13	0	0.00	0	0.00
	>=40	780	13.49	926	16.02	34	2.62	35	2.57	0	0.00	5	0.09
	O0-O3,W0-W3	1,416	10.05	1,688	11.98	81	6.23	83	6.09	4	0.03	16	0.11
	O4-O10,W4-W5	1,025	11.31	1,213	13.39	51	3.92	52	3.82	1	0.01	6	0.07
	General/Flag Ofc & Executives	25	12.63	33	16.68	0	0.00	0	0.00	0	0.00	0	0.00
	Tactical Operations Off.	822	9.84	972	11.63	43	3.31	43	3.15	3	0.04	14	0.17
	Intelligence Off.	128	10.24	151	12.08	7	0.54	7	0.51	0	0.00	0	0.00
	Engineering & Maintenance Off.	361	10.61	447	13.13	29	2.23	30	2.20	2	0.06	4	0.12
	Healthcare Off.	418	11.85	486	13.78	23	1.77	23	1.69	0	0.00	1	0.03
	Scientists & Professional Off.	131	10.35	152	12.01	8	0.62	8	0.59	0	0.00	0	0.00
	Administrative Off.	141	9.37	178	11.83	9	0.69	11	0.81	0	0.00	1	0.07
	Supply & Logistics Off.	193	10.52	239	13.03	10	0.77	10	0.73	0	0.00	1	0.05
	Students, Trainees & Unknown Off.	222	12.22	243	13.38	3	0.23	3	0.22	0	0.00	1	0.06
	Army	758	9.30	968	11.87	79	6.08	82	6.02	4	0.05	10	0.12
	Navy	727	13.94	798	15.31	19	1.46	19	1.39	1	0.02	3	0.06
	Air Force	675	9.51	805	11.34	31	2.38	31	2.27	0	0.00	3	0.04
	Marine Corps	182	9.59	214	11.28	3	0.23	3	0.22	0	0.00	6	0.32
	Coast Guard	99	12.61	116	14.78	0	0.00	0	0.00	0	0.00	0	0.00

1. Rates are per 1,000 person-years.

2. Use of ICD-9-CM E-codes for "cause of injury" is largely incomplete for theater healthcare records and therefore omitted.

3. Person-time is not available for deployers so the proportion of the total number of diagnoses is shown.

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Prepared by Armed Forces Health Surveillance Center (AFHSC)

Source: Defense Medical Surveillance System (DMSS) as of 29-MAR-2011



**TRI-SERVICE  
VISION  
CONSERVATION  
AND READINESS**